

REMARKS/ARGUMENTS

Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks.

Claims 11-15 and 25-43 were pending prior to the Office Action. In this Amendment, claim 29 is canceled without prejudice or disclaimer. Therefore, claims 11-15, 25-28 and 30-43 are pending. Claims 11 and 12 remain independent.

A. AMENDMENTS RELATIVE TO FINALLY REJECTED CLAIMS

The Amendment After-Final Rejection submitted on January 7, 2011 has not been entered into the record. *Advisory Action dated January 12, 2011.* Thus, the amendments to claims made in this submission are relative to the claims that were finally rejected in the Office Action dated October 14, 2010.

B. §102 REJECTION - KUWANO

Claims 11, 12, 25-27 and 30 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Kuwano et al. (U.S. Patent No. 4,281,208, *hereinafter Kuwano*). Applicants respectfully traverse.

Independent claim 11 is amended to incorporate the feature of canceled claim 29. More specifically, claim 11 recites, in part “wherein the opening portion does not electrically separate the transparent electrode layer.” In the

Office Action, Kuwano is not relied upon to teach or suggest this feature. This is sufficient to distinguish claim 11 from Kuwano.

Independent claim 12 recites, in part “wherein the opening portion does not electrically separate the first transparent electrode layer.” As discussed above, Kuwano does not teach or suggest this feature. This is sufficient to distinguish claim 12 from Kuwano.

But in addition, claim 12 is clarified to recite “a first photoelectric conversion layer stacked above a structure”, “a first intermediate layer stacked above the first photoelectric conversion layer,” and “a second photoelectric conversion layer stacked above the first intermediate layer such that the first intermediate layer is sandwiched between the first and second photoelectric conversion layers.”

In the Office Action, the Examiner alleges that the photoelectric converting regions 81, 82 and 83 described in Kuwano are equivalent to a plurality of photoelectric conversion layers. It is noted that the regions 81, 82 and 83 are formed side by side – not stacked above one another. This is in contrast with the claimed features.

At least for the above stated reasons, claim 12 is distinguishable over Kuwano. Claims 25-27 and 30 are distinguishable over Kuwano by virtue of their dependencies from independent claim 11 as well as on their own merits.

Applicants respectfully request that the rejection of claims based on Kuwano be withdrawn.

C. §102 REJECTION - SATO

Claims 11, 25-27, 29-31 and 35 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Sato et al. (EP 1443527, *hereinafter Sato*). Applicants respectfully traverse.

Independent claim 11 recites, in part “wherein the opening portion is not covered by the transparent electrode layer.” Sato does not teach or suggest this feature.

The Examiner relies upon Figs. 1 and 5 of Sato to allegedly disclose the features of claim 11. Fig. 1 illustrates a substrate 1 and a transparent conductive oxide (TCO) film formed thereon. *Sato*, [0018]. The substrate is covered by discontinuous small ridges 4 made of a first oxide, and a continuous layer 5 made of a second oxide. *Sato*, [0033]-[0035].

It is unclear whether the Examiner considers the continuous layer 5 or the discontinuous small ridges 4 to be equivalent to the claimed transparent electrode layer. Clearly, the combination of the small ridges 4 and the continuous layer 5 cannot be taken to be equivalent to the claimed transparent electrode layer since the combination can not disclose the feature of the opening portion “within which the transparent electrode layer is absent.”

But regardless of whether the continuous layer 5 or the small ridges 4 individually is asserted to be equivalent to the claimed transparent electrode layer, Sato does not disclose the features of claim 11. First, the small ridges 4 are explicitly recited to be “discontinuous” by Sato. *Sato*, [0035]. As such, the

feature of “wherein the opening portion does not separate the transparent electrode layer” cannot be shown if the ridges 4 are asserted to equivalent to the claimed transparent electrode layer.

Second, if the continuous layer 5 is asserted to be equivalent, then the claimed opening portions must correspond to the regions occupied by the small ridges 4. However, it is clear that the continuous layer 5 completely covers the small ridges 4. This is in complete contrast to the feature of “wherein the opening portion is not covered by the transparent electrode layer.”

It is seen that no matter the interpretation, Sato cannot disclose the features of claim 11. As such, claim 11 is distinguishable over Sato. Claims 25-27, 29-31 and 35 are also distinguishable over Sato by virtue of their dependencies from claim 11 as well as on their own merits.

Applicants respectfully request that the rejections based on Sato be withdrawn.

D. §103 REJECTION - SATO

Claims 28 and 32-34 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sato. Applicants respectfully traverse.

These claims depend from independent claim 11 directly or indirectly. Therefore, these claims are also distinguishable over Sato by virtue of their dependencies from independent claim 11 as well as on their own merits.

Applicants respectfully request that the rejection of claims 28 and 32-34 based on Sato be withdrawn.

E. §103 REJECTION – SUZUKI, SATO

Claims 11-15, 25 and 36-43 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Suzuki et al. (U.S. Patent No. 5,350,459, *hereinafter Suzuki*) in view of Sato. Applicants respectfully traverse.

The Examiner admits that Suzuki does not disclose the transparent electrode layer as recited in claim 1, but alleges that Suzuki's deficiency can be corrected through Sato. But as demonstrated above, Sato is deficient. For at least this reason, independent claims 11 and 12 are distinguishable over Suzuki and Sato.

The Examiner also alleges that Suzuki teaches a plurality of conversion layers. In actuality, Suzuki teaches a single photoelectric conversion layer composed of first and second electron acceptor organic layers EAOL (I) and (II), and first and second electron donor organic layers EDOL (I), and (II). *Suzuki, column 6, lines 12-17; Figs. 1 and 2.* Suzuki is explicit that the electric charges "are generated at the interface between the second electron acceptor organic layer EAOL (II) and the first electron donor organic layer EDOL (I)." *Suzuki, column 6, lines 17-21.* Simply put, the entirety of the organic layers EAOL (I), EAOL (II), EDOL (I) and EDOL (II) form a single photovoltaic layer. This is in

complete contrast to claim 12 which recites first and second photoelectric conversion layers.

For at least the above stated reasons, claims 11 and 12 are distinguishable over the combination of Suzuki and Sato. Claims 12-15, 25 and 36-43 are distinguishable over Suzuki and Sato by virtue of their dependencies from independent claims.

The dependent claims are also distinguishable on their own merits. For example, claims 13 and 14 both recite “wherein the first intermediate layer has at least an opening portion within which the first intermediate layer is absent.” The Examiner alleges that the pin holes described in column 6 and in column 40 are equivalent to the claimed opening portion of the first intermediate layer. As demonstrated above, the EAOL (II) layer is part of the single photoelectric conversion layer in Suzuki. Suzuki does not disclose any layers resembling the claimed intermediate layer.

For at least the reasons stated above, Applicants respectfully request that the rejections of claims based on Suzuki and Sato be withdrawn.

F. CONCLUSION

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Hyung Sohn

(Reg. No. 44,346), to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for a one (1) month extension of time for filing a reply in connection with the present application, and the required fee is attached hereto.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Respectfully submitted,

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By: _____



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